These comments on the above matters are based on my many years as a vendor to the first responder community (Motorola Communications and Electronics, RCA Mobile Communications, General Electric Mobile Radio and Biocom, Inc.) and more than 30 years as a consultant and analyst in the wireless and mobile computing industry.1

The FCC originally decided to provide an additional 24 MHz of spectrum for the first responder community in the 700-MHz band. I did not believe this was sufficient to solve the many congestion and interoperability problems faced by the first responder community on a day-to-day basis. When the FCC authorized an additional 50 MHz of spectrum in the 4940-4990 MHz range for broadband and advanced technology applications, I was concerned that this allocation was not in the best interests of the public safety community because the propagation characteristics in this spectrum are not well suited for metro-area or wide-area broadband services.

I believe that an additional spectrum allocation in the 700-MHz band is absolutely necessary and now is the time to act on this. The 700-MHz spectrum is far better suited for metro and wide-area communications voice and data services than spectrum at 4940-4990. Further, radio equipment can be designed for use in both the 700-MHz and 800-MHz band where spectrum is already available for the public safety community.

Since the 700-MHz spectrum under consideration will not be available for some period of time (depending on HD-TV rulings), there is an urgent need to provide additional allocations in this band for the public safety community.

Regarding the use of existing and future commercial communications networks, the new or 3G technologies being deployed by commercial wireless network operators will be improving Quality of Service and providing increasingly faster data service capabilities, and the future move to Voice over IP (VoIP) will certainly solve some of the problems associated with the public safety community competing with private citizens for commercial airwaves. However, it is my contention that commercial networks should be used only for secondary public safety communications and not for mission-critical dispatch operations.

This belief is based on a number of factors. The first is that today's first responder networks have been built to provide wide-area coverage for public safety agencies' service areas. In most cases, they provide coverage in areas where commercial networks do not. While commercial wireless operators want to extend their coverage and are willing to spend the necessary funds, recent decisions by cities, counties and local homeowners associations' to limit construction of new wireless cell sites makes it difficult for commercial service providers to match public safety systems' coverage.

Emerging technologies for commercial networks could be deployed in a new 700-MHz allocation to provide broadband services and Voice over IP as they mature. In the future, the public safety community could realize a cost savings from using one or more 3G technologies over the next few years.

A Broader View

I believe that now is an advantageous time for the FCC, the Department of Homeland Security, the NTIA and Congress to take a broader view when

it comes to the first responder community. System interoperability between federal, state and local emergency response providers must be considered as well.

In their preparation of the report for Congress, I propose that these agencies consider the following broader proposal:

1) That a nationwide IPv6 network be established to interconnect all federal, state and local first responder agencies. This network should not make use of the Internet. It should be a new, standalone system that is secure and built to exacting standards.

2) That all agencies be connected to this new IPv6 network as the first phase in providing interoperability by cross-connecting federal, state and local agencies when working together and that this network be used on a local basis to provide true interoperability between local agencies on a day-to-day basis.

3) Development of a standard first responder radio that operates on both 800- and 700-MHz. These radios would include all channels available for all first responder systems licensed in these bands as well as broadband data capabilities.

a. Radios would include a control channel and could be programmed over the air as needed for use by all agencies responding to emergencies, including federal, state and local agencies.

b. Radios would be capable of analog, P25, broadband data and later, Voice over IP.

4) Where 700- and 800-MHz propagation is not economically feasible, existing 30-, 150-, 450-MHz and other public safety systems could be tied into the new radios via the public safety internet system.

a. Departments could trade out their existing systems where economically

possible or gradually upgrade to the new radios.

Such a long-range proposal would go a long way toward solving a multitude of problems with interoperability and spectrum management for the first responder community.

Respectfully submitted,

Andrew M. Seybold

President, Outlook 4Mobility

(www.4mobility.com)

1 See additional biographical and related articles at www.4mobility.com

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